

**630 CUMMINGS AVENUE REDEVELOPMENT  
630 CUMMINGS AVENUE  
OTTAWA, ONTARIO**

**STRATEGY REPORT**

February 21, 2020

**D. J. Halpenny & Associates Ltd.**  
CONSULTING TRANSPORTATION ENGINEERS  
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February 21, 2020

Prepared for:

Apartments For Rent Ottawa  
108-2448 Carling Avenue  
Ottawa, ON K2B 7H3

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# **630 CUMMINGS AVENUE REDEVELOPMENT 630 CUMMINGS AVENUE OTTAWA, ONTARIO**

## **STRATEGY REPORT**

### **STEP 1 - SCREENING**

A Screening Form has been prepared for the apartment units proposed for the addition to the existing apartment building at 630 Cummings Avenue. The Screening Form, which is included as Exhibit 1.1 in the Appendix, determined that the apartment addition would meet the Safety Trigger for a TIA Study due to the proximity of the building driveway to a signalized intersection. City of Ottawa staff has requested that further TIA reports are required to address MMLOS and the potential for spillover parking.

### **STEP 2 - SCOPING**

#### **MODULE 2.1 – Existing and Planned Conditions**

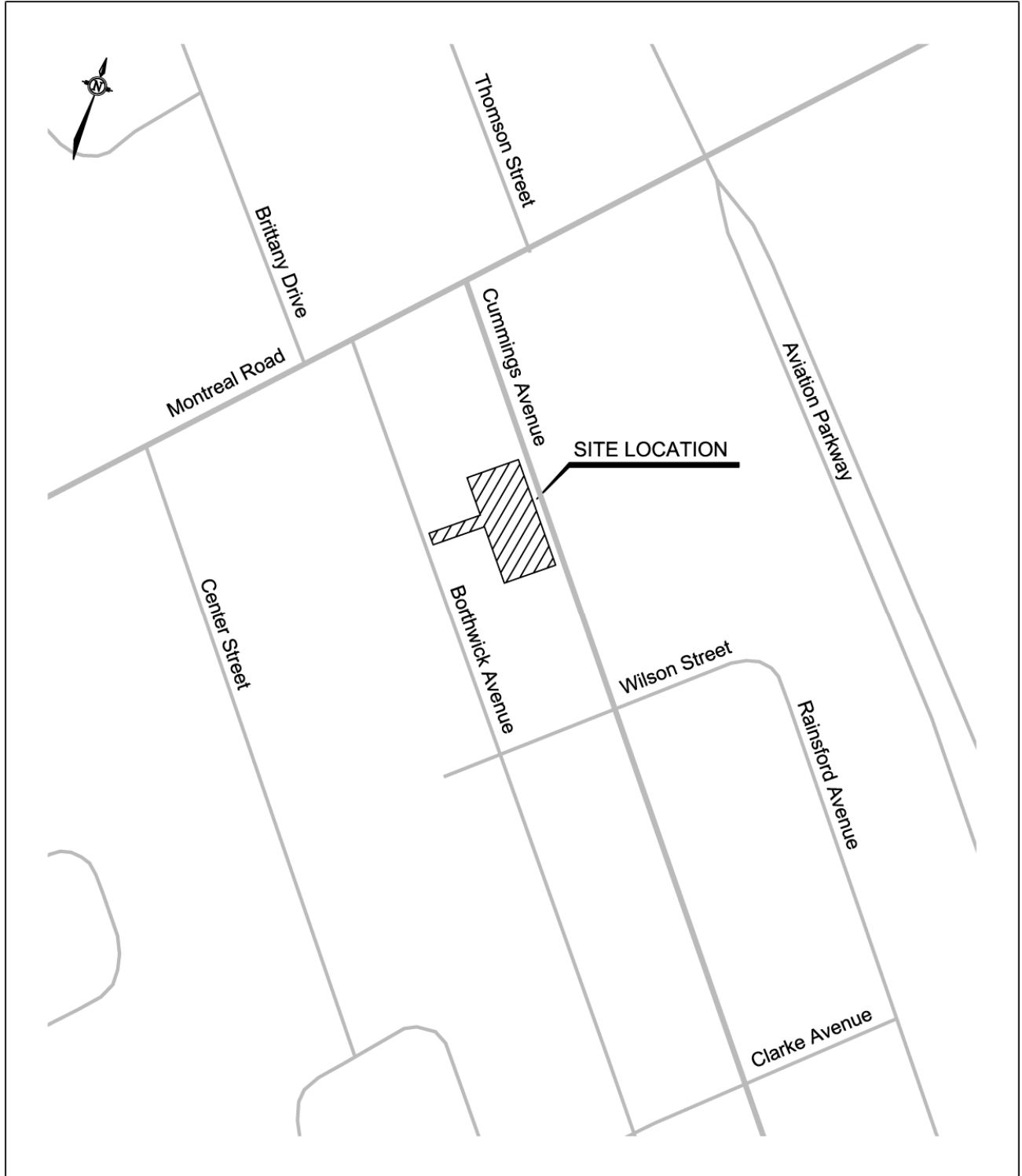
##### **Element 2.1.1 – Proposed Development**

The proposed development will consist of the additions to the existing apartment building at 630 Cummings Avenue. The apartment building is located on the west side of Cummings Avenue approximately 125 m south of Montreal Road. Figure 2.1 shows the location of the site.

The existing property has a lot size of 1,546 m<sup>2</sup> which contains one three storey apartment building with 12 apartment units. The building has the main entrance off of Cummings Avenue, and a rear entrance to the parking lot which has direct access onto Borthwick Avenue. The existing parking lot currently contains 11 parking spaces for the 630 Cummings Avenue building.

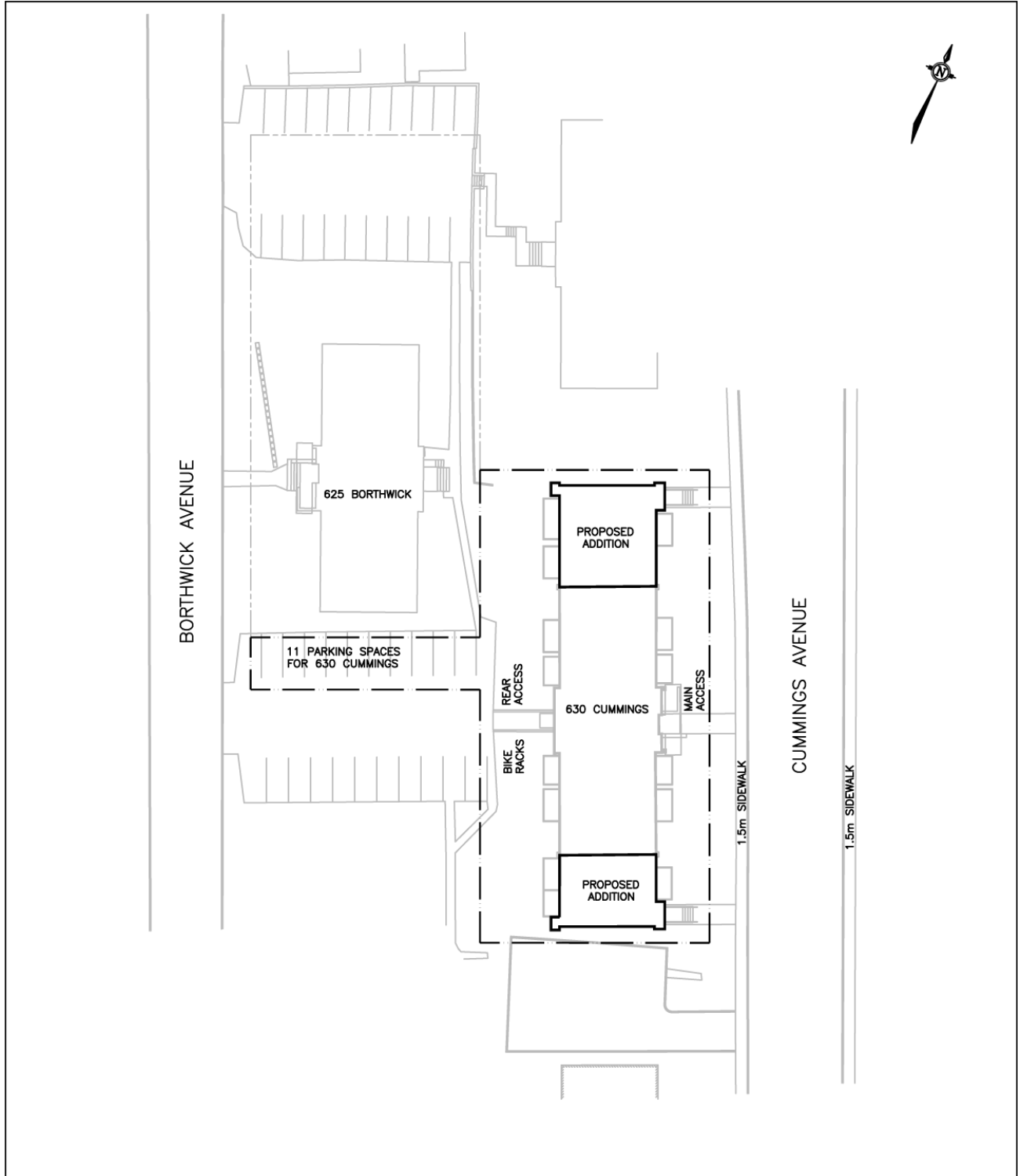
The proposed redevelopment will consist of an addition to both the north side (9 units) and south side (9 units) of the existing apartment building which will provide an additional 18 rental units. The existing 12 unit apartment building will be renovated to provide 24 apartment units for a total of 30 additional apartment units in the 3 storey building. At completion, the renovated 630 Cummings Avenue apartment building will provide a total of 42 apartment units (12 existing and 30 new units). The property is currently zoned R4N “Residential Fourth Density Zone” which will support the proposed addition. The building will retain the 11 vehicle parking spaces for all 42 apartment units, and provide bicycle parking for 21 bikes. Figure 2.2 provides a conceptual site plan of the apartment addition which is expected to be completed by the year 2022.

**FIGURE 2.1**  
**SITE LOCATION PLAN**



NOT TO SCALE

**FIGURE 2.2**  
**CONCEPTUAL SITE PLAN**



NOT TO SCALE

## **Element 2.1.2 – Existing Conditions**

### **Cummings Avenue**

The apartment building at 630 Cummings Avenue is located along Cummings Avenue approximately 125 m south of Montreal Road. Cummings Avenue in the vicinity of the site is designated as a collector road in the City of Ottawa *Transportation Master Plan* (TMP). The road has an urban cross section with a pavement width of 11 m. There are 1.5 m wide sidewalks on both sides of the road, with the west sidewalk adjacent to the building property integrated with the curb, and the east sidewalk having a boulevard of approximately 1.5 m between the curb and sidewalk.

OC Transpo bus Routes 20 and 27 travel along Cummings Avenue past the site. Vehicle parking/stopping is prohibited along the street in the vicinity of the bus stops.

The speed limit is unposted at 50 km/h. Traffic calming measures are implemented along the street which is designated as a “Traffic Calmed Neighbourhood”. Truck traffic is prohibited along Cummings Avenue between Donald Street and Montreal Road.

### **Borthwick Avenue**

Borthwick Avenue is designated as an urban local road with a pavement width of 8.5 m. There are no sidewalks along the street in the vicinity of the site.

On-street parking is prohibited along the east side of the street. There are no restrictions to parking along the west side of the street.

The speed limit is unposted at 50 km/h.

### **Cummings Avenue and Montreal Road Intersection**

The Cummings/Montreal intersection is a “T” intersection controlled by traffic signals. Cummings Avenue forms the northbound approach and Montreal Road the eastbound and westbound approaches. The following is the lane configuration of the intersection:

Northbound Cummings	One left turn lane One right turn lane
Eastbound Montreal	One through lane One shared through/right lane
Westbound Montreal	One left turn lane Two through lanes

### **Borthwick Avenue and Montreal Road Intersection**

The Borthwick/Montreal intersection is a two-way stop controlled intersection with the stop sign installed at the northbound Borthwick Avenue approach. The intersection is a

“T” intersection with Montreal Road forming the eastbound and westbound approaches. The following is the lane configuration of the intersection:

Northbound Borthwick	One shared left/right turn lane
Eastbound Montreal	One through lane
	One shared through/right lane
Westbound Montreal	One left turn lane
	Two through lanes

Collision reports were obtained from the City of Ottawa through Open Data Ottawa for the five year time period between the years January 1, 2014 and December 31, 2018. The collision reports were for the road segments of Cummings Avenue and Borthwick Avenue between Wilson Street and Montreal Road. During the five year period 3 collisions were reported along the Cummings Avenue road segment and 0 collisions along the Borthwick Avenue road segment. Table 2.1 summarizes the collisions by year and type.

**TABLE 2.1  
 COLLISION SUMMARY**

YEAR	COLLISION TYPE				OTHER (SMV)	TOTAL
	REAR END	ANGULAR	TURNING	SIDESWIPE		
<b>Cummings Avenue between Wilson Street and Montreal Road</b>						
2014	0	1	0	0	0	1
2015	0	1	0	0	0	1
2016	0	0	0	0	0	0
2017	1	0	0	0	0	1
2018	0	0	0	0	0	0
<b>Borthwick Avenue between Wilson Street and Montreal Road</b>						
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	0	0	0	0	0
2017	0	0	0	0	0	0
2018	0	0	0	0	0	0

**Element 2.1.3 – Planned Conditions**

The Planned Conditions element considers any planned development within the study area or planned changes to the study area transportation network. There are no planned changes within the study area which would have an impact on the development.



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## **MODULE 2.2 – Study Area and Time Periods**

### **Element 2.2.1 – Study Area**

The 18 proposed apartment units will be part of the addition to the existing apartment building at 630 Cummings Avenue. The additions will be constructed on both the north and south sides of the building with the main access onto Cummings Avenue and the rear access onto Borthwick Avenue through the existing parking lot. The existing 12 unit apartment building will be renovated to provide 24 apartment units or an increase of 12 units when compared to the existing building.

With no additional parking spaces provided for the 30 new apartment units, the scope of the study will be confined to the roadway segments along Cummings Avenue and Borthwick Avenue in the vicinity of the site. No additional parking is provided for the new units which would result in no additional vehicular trips generated by the renovated apartment building. City of Ottawa staff comments from the review of the Scoping Document stated that Module 3.1 - Development-generated Travel Demand would be exempt from the TIA study. The study will therefore determine the level of service for the Pedestrian, Bicycle, and Transit modes of travel for the Cummings Avenue and Borthwick Avenue road segments adjacent to the site of the redeveloped apartment building at 630 Cummings Avenue.

### **Element 2.2.2 – Time Periods**

The time period for the analysis would be the weekday peak AM and PM time period of traffic which would occur during the peak hour of the adjacent street traffic when drivers are travelling to and from work. This would be the peak time for both the background traffic and trips generated by the apartment building use.

### **Element 2.2.3 – Horizon Years**

The TIA will address the impact of the additional apartment units which are expected to be completed and occupied by the year 2022. The analysis will examine the impact of the Pedestrian, Bicycle, and Transit modes of travel at the completion of the apartment building renovation plus five years to the year 2027.

## **MODULE 2.3 – Exemptions Review**

The exemptions, which provide possible reductions to the scope of work of the TIA Study, were examined using Table 4: Possible Exemptions which is provided in the City's *Transportation Impact Assessment Guidelines (2017)*. Utilizing the table, the following lists the possible exemptions proposed for the TIA Study report:

In addition to the possible exemptions stated in the TIA Guidelines, Modules 3.1 and Modules 4.5 to 4.9 are exempt as per City of Ottawa staff review of the Scoping Document.

MODULE	ELEMENT	EXEMPTION CONSIDERATIONS
<b>Design Review Component</b>		
3.1 Development-generated Travel Demand	All Elements	Yes - As per City Staff Review
4.1 Development Design	4.1.2 Circulation and Access	Yes – The parking lot for the site will not be modified and will still contain 11 spaces for tenant parking.
	4.1.3 New Street Networks	Yes - The plan does not add any additional vehicular trips.
4.2 Parking	4.2.1 Parking Supply	No – The parking supply will be examined. The number of parking spaces will be discussed.
	4.2.2 Spillover Parking	No - Parking Supply/Demand will be examined within the site and on the street.
<b>Network Impact Component</b>		
4.5 Transportation Demand Management	All Elements	No – TDM measures will be discussed.
4.6 Neighbourhood Traffic Management	All Elements	Yes - As per City Staff Review
4.7 Transit	All Elements	Yes - As per City Staff Review
4.8 Network Concept		Yes - As per City Staff Review
4.9 Intersection Design	All Elements	Yes - As per City Staff Review

## STEP 3 - FORECASTING

### MODULE 3.1 – Development-generated Travel Demand

Exempt as determined in the City of Ottawa staff review of the Scoping Document.

### MODULE 3.2 - Background Network Travel Demands

#### Element 3.2.1 – Transportation Network Plans

The City of Ottawa *Transportation Master Plan 2013* (TMP) was reviewed to identify transit and roadway projects in the vicinity of the development. The TMP did identify a Rapid Transit and Transit Priority (RTTP) project under the “2031 Affordable Network”. The project involves the segment of Montreal Road and Blair Road between the Rideau Station and Blair Station and would consist of the extension of bus-only hours on

existing priority lanes and new exclusive lanes east of St. Laurent Boulevard. The project would likely be completed outside the horizon year of the TIA study. There were no road projects identified within the study area of the development.

### **Element 3.2.2 – Background Growth**

The growth in the background traffic was determined by examining proposed development and TIA studies in the area and historical traffic counts at major intersections. The counts in the surrounding road network showed that the background traffic has increased at an annual compounded average of 1.0 percent.

### **Element 3.2.3 – Other Developments**

Other developments proposed in the area or are under a development application are the following:

*603 Cummings Avenue* - A residential apartment building proposing 8 dwelling units.

*1068-1090 Cummings Avenue* - A senior residence proposing 186 retirement apartments and 130 senior apartments. The development would generate few peak hour trips along Cummings Avenue past the site.

*1098 Ogilvie Road* - Corner of Ogilvie Road and Cummings Avenue. The Site Plan proposes 870 residential apartment units and 182 hotel rooms in three towers. The TIA does not assign any trips along Cummings Avenue past the site.

*765 Montreal Road* - The Site Plan proposes a Shepherds of Good Hope building with few trips along Montreal Road at Cummings Avenue.

*825 Montreal Road* - A residential apartment building with 149 units and retail on the ground floor. The TIA has assigned a small number of trips along Montreal Road at Cummings Avenue which would result in a minor impact on the adjacent roads.

## **MODULE 3.3 - Demand Rationalization**

The Transportation Impact Assessment studies completed in the surrounding area have not identified any travel demand issues in the immediate area. Collision reports over a five year period along the roadway segments of Cummings Avenue and Borthwick Avenue in the vicinity of the site have not shown a problem associated with roadway safety or travel demand in the area. There are no roadway or transit projects planned for the area within the time period of the TIA study.

The apartment development at 630 Cummings Avenue does not propose any additional parking which would result in no new vehicle trips. The existing parking lot has access only onto Borthwick Avenue with no vehicular access onto Cummings Avenue. There would be no requirement to apply measures to reduce travel demand to either background traffic or site related trips.

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## **STEP 4 – ANALYSIS**

### **MODULE 4.1 – Development Design**

#### **Element 4.1.1 – Design for Sustainable Modes**

The Site Plan provides 11 parking spaces for the apartment building. The number of spaces will not increase due to the additional apartment units for the site.

The Site Plan will provide space for the storage of 21 bicycles on the site. The bike racks will be located in close proximity to the rear entrance to the apartment building. The number of bicycle spaces provided would satisfy the City of Ottawa By-laws. Cummings Avenue is designated as a collector road and Borthwick Avenue a local road. There are no cycling facilities along either road. Montreal Road in the vicinity of the site is designated as a Spine Road in the City of Ottawa TMP Primary Network, with designated cycling lanes along the eastbound and westbound lanes.

OC Transpo Route 20 and Route 27 travel along Cummings Avenue with service to the St. Laurent Transit Station. Bus stops in both the northbound and southbound directions of travel are located approximately 85 m north of the 630 Cummings Avenue apartment building. OC Transpo Route 12 and Route 15 travel along Montreal Road with service between the downtown core and the Blair Transit Station. Bus stops in the eastbound direction are located as near side stops to the Cummings/Montreal intersection, and stops in the westbound direction as far side stops to the Brittany/Montreal intersection.

Pedestrian sidewalks are provided along both sides of Cummings Avenue. There are no pedestrian sidewalks along Borthwick Avenue.

#### **Element 4.1.2 – Circulation and Access**

Exempt as determined in the Scoping Document.

#### **Element 4.1.3 – New Street Networks**

Exempt as determined in the Scoping Document.

### **MODULE 4.2 – Parking**

#### **Element 4.2.1 – Parking Supply**

##### *Auto Parking*

The building site currently has 12 apartment units with an additional 30 units following the building addition and renovation for a total of 42 apartment units. The site has an existing parking lot for the building which contains 11 vehicular parking spaces. The

Site Plan does not propose any additional parking spaces for the project, which will promote the use of other modes of transportation.

The City of Ottawa Parking By-laws determined that the site would require a minimum of 20 parking spaces. A parking exemption from the Committee of Adjustment may be required.

### *Bicycle Parking*

The Site Plan provides 21 spaces for the parking and storage of bicycles. The location of the parking facility is near the rear entrance to the building.

The provided parking meets the required number of spaces as determined in the City of Ottawa By-laws.

### **Element 4.2.2 – Spillover Parking**

On-street parking is available along both Cummings Avenue and Borthwick Avenue. The on-street parking was evaluated along both streets between Wilson Street and Montreal Road.

Cummings Avenue allows parking along both sides of the road with parking prohibited in close proximity to bus stops. The available parking was determined from curb side space where parking was allowed and there were no private driveways. Parking is prohibited along the east side of Borthwick Avenue. Available parking was determined along the west side of the street where there were no private driveways. Table 4.1 summarizes the available or parking supply along both Cummings Avenue and Borthwick Avenue which shows that there were 60 available parking spaces along both streets between Wilson Street and Montreal Road.

**TABLE 4.1  
 ON-STREET PARKING**

Street Location	Available Spaces (Supply)	Occupied Spaces (Demand)					
		Google Aerial	Google Street 2018	City Aerial 2017	City Aerial 2015	City Aerial 2014	City Aerial 2011
Cummings Ave. East Side	18	7	4	7	8	11	6
Cummings Ave. West Side	16	3	2	1	5	5	6
Borthwick Ave. West Side	26	7	8	2	5	11	7
<b>Available &amp; Occupied Spaces</b>	<b>60</b>	<b>17</b>	<b>14</b>	<b>10</b>	<b>18</b>	<b>27</b>	<b>19</b>

The parking demand was determined by the survey of occupied parking spaces using google aerial mapping and street view, and the City of Ottawa aerial mapping (geoOttawa) taken between the years 2011 and 2017. The number of occupied parking spaces along both streets between Wilson Street and Montreal Road averaged 17 occupied parking spaces. Table 4.1 lists the number of occupied parking spaces along both streets.

The parking survey determined that the parking utilization along Cummings Avenue and Borthwick Avenue was:

$$\begin{aligned}\text{Parking Utilization} &= \text{Occupancy/Available Parking} \\ &= 17/60 \\ &= 28.3 \% \text{ occupancy}\end{aligned}$$

The City of Ottawa requires 20 parking spaces under the parking By-laws with only 11 parking spaces provided on the site. There may be the possibility of spillover parking onto the adjacent streets which experiences a 28.3 percent utilization resulting in 43 available parking spaces between Wilson Street and Montreal Road based on the parking utilization survey. Based on the survey results, there would be adequate on-street parking if spillover parking were to occur.

The 630 Cummings Avenue apartment building is located approximately 85 m south of the bus stops for OC Transpo Route 20 and Route 27 (Cummings Avenue) which provide service to the St. Laurent Transit Station, and approximately 150 m from the OC Transpo Route 12 and Route 17 (Montreal Road) which provide service to either the Blair Transit Station to the east, or the downtown core to the west. The close proximity of bus stops to the site would tend to reduce the demand for on-site parking and promote the use of transit for building tenants.

### **MODULE 4.3 – Boundary Street Design**

The City of Ottawa Complete Streets concept allows for the safe movement of everyone whether they choose to walk, bike, drive, or take public transit. The boundary roads to the 630 Cummings Avenue apartment building are Cummings Avenue adjacent to the front of the apartment building, and Borthwick Avenue adjacent to the rear of the building.

Cummings Avenue is an 11 m collector road which provides pedestrian sidewalks along both sides of the road and transit routes past the site. Cummings Avenue has no cycling facilities and is not designated as an On-road Cycling Route.

Borthwick Avenue is an 8.5 m local road with no sidewalks or cycling facilities.

Reported traffic collisions along Cummings Avenue and Borthwick Avenue between Wilson Street and Montreal Road are shown in Table 2.1 in Element 2.1.2. Over the five year period between January 1, 2014 and December 31, 2018, 3 collisions were recorded along Cummings Avenue and 0 collisions along Borthwick Avenue. The

pattern of collisions did not identify any measures which could be taken to reduce the number of collisions.

## **MODULE 4.4 – Access Intersection Design**

### **Element 4.4.1 – Location and Design of Access**

The only vehicular access to the site is the existing access at the rear of the building which provides direct access to Borthwick Avenue. There are no proposed modifications proposed for the access or building parking lot.

### **Element 4.4.2 – Intersection Control**

The access to the parking lot for 630 Cummings Avenue will be from the rear of the building with direct access onto Borthwick Avenue. The access intersection will be controlled by an implied stop sign at the westbound exit movement onto Borthwick Avenue. There are no changes proposed to the access or number of spaces for the parking lot.

### **Element 4.4.3 – Intersection Design**

The proposed additions and renovations to the apartment building do not include an increase in on-site parking. The tenants of the building may use transit or other modes of transportation other than private vehicles which would result in a negligible impact on the operation of intersections and road segments. Module 3.1 was exempt from the TIA document as per City staff comments during the review of the Scoping Document. Vehicular analysis of intersections and road segments will not be completed under this Module.

Since transit, pedestrian and cycling modes would be the major modes of transportation and the scope of the TIA would be the road segments along Cummings Avenue and Borthwick Avenue between Wilson Street and Montreal Road, the MMLOS analysis will comprise of the analysis of non-vehicular modes of travel along the road segments of Cummings Avenue and Borthwick Avenue.

## **PEDESTRIAN LEVEL OF SERVICE (PLOS)**

The pedestrian level of service was determined utilizing the City of Ottawa publication, *Multi-Modal Level of Service (MMLOS) Guidelines*. There are sidewalks along both sides of Cummings Avenue (no boulevard on the west side) with a 1.5 m width of sidewalk. There are no pedestrian sidewalks along Borthwick Avenue which is a local street. Table 4.2 presents the level of service for the Cummings Avenue and Borthwick Avenue street segments adjacent to the site, with the analysis provided in the Appendix.

**TABLE 4.2  
 PEDESTRIAN LEVEL OF SERVICE (PLOS) – Street Segments**

Street	Segment	Segment LoS	Analysis	Target LoS
Cummings Ave.	Wilson St. to Montreal Rd.	E	Exhibit 4.1	C
Borthwick Ave.	Wilson St. to Montreal Rd.	F	Exhibit 4.2	C

The low level of service (LoS) along Cummings Avenue is due to the existing 1.5 m wide sidewalks with no boulevard on the west side adjacent to the apartment building.

Borthwick Avenue is a local street with no sidewalks along either side of the road which results in a low level of service.

**BICYCLE LEVEL OF SERVICE (BLOS)**

The bicycle level of service (BLOS) was determined utilizing the City of Ottawa MMLOS Guidelines. TMP does not identify Cummings Avenue as a Spine Route in the Primary Cycling Network and there are no cycling lanes along the road past the site. Borthwick Avenue is identified as a local road in the TMP. Table 4.3 presents the level of service for the road segments with the analysis sheets provided in the Appendix.

**TABLE 4.3  
 BICYCLE LEVEL OF SERVICE (BLOS) – Street Segments**

Street	Segment	Segment LoS	Analysis	Target LoS
Cummings Ave.	Wilson St. to Montreal Rd.	D	Exhibit 4.3	D
Borthwick Ave.	Wilson St. to Montreal Rd.	B	Exhibit 4.4	B

The BLOS has met the target for both Cummings Avenue and Borthwick Avenue.

**TRANSIT LEVEL OF SERVICE (TLOS)**

Transit service is provided along Cummings Avenue past the site. Bus stops are located along the road approximately 85 m north of the apartment building. There are no dedicated transit lanes along Cummings Avenue. Borthwick Avenue has no transit service along the road. Table 4.4 presents the level of service along the Cummings Avenue street segment which was determined from the evaluation table provided in the City of Ottawa publication, *Multi-Modal Level of Service (MMLOS) Guidelines*.



**TABLE 4.4  
 TRANSIT LEVEL OF SERVICE (TLOS) – Street Segments & Intersections**

Street	Segment	Segment LoS	Analysis	Target LoS
Cummings Ave.	Wilson St. to Montreal Rd.	D	Exhibit 4.5	N/A *
Borthwick Ave.	Wilson St. to Montreal Rd.	N/A	N/A	N/A

\* There are no targets along a collector road with no transit priority plans

**TRUCK LEVEL OF SERVICE (TkLOS) - Street Segments**

The truck level of service (TkLOS) was not determined due to the prohibition of truck travel along Cummings Avenue between Donald Street and Montreal Road. Borthwick Avenue is a local street and would not experience any significant truck traffic.

**MODULE 4.5 – Transportation Demand Management**

**Element 4.5.1 – Context for TDM**

The site is located in an urban area well serviced by transit and pedestrian sidewalks. The area is predominantly a residential area along Cummings Avenue and Borthwick Avenue, with commercial/retail and other amenities along Montreal Road. Previous traffic studies for development in the area and collision reports have identified no operational problems in the area. The 630 Cummings Avenue apartment is expected to generate few if any additional vehicular trips to the surrounding roadway network which would result in a minor impacted on the adjacent road and intersections.

**Element 4.5.2 – Need and Opportunity**

The apartment building addition and renovations will not include the construction of any additional parking spaces to the existing 11 space parking lot. The apartment building will add few if any additional vehicular trips to the surrounding roads. If additional trips are generated, there is sufficient on-street parking available (Element 4.2.2 - Spillover Parking) to accommodate a few extra vehicles.

**Element 4.5.3 – TDM Program**

The TDM measures which would reduce the number of vehicle trips would be the lack of additional on-site parking and the close proximity to transit routes to the St. Laurent and Blair Transit Stations and the downtown core.

The study has utilized the TDM-Supportive Development Design and Infrastructure Checklist which examines the implementation of facilities that are supportive of sustainable modes. The following provides the TDM Measures Checklist.

## TDM Measures Checklist: *Residential Developments (multi-family, condominium or subdivision)*

<b>Legend</b>	
<b>BASIC</b>	The measure is generally feasible and effective, and in most cases would benefit the development and its users
<b>BETTER</b>	The measure could maximize support for users of sustainable modes, and optimize development performance
★	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
<b>1. TDM PROGRAM MANAGEMENT</b>		
<b>1.1 Program coordinator</b>		
BASIC	★	1.1.1 Designate an internal coordinator, or contract with an external coordinator <input type="checkbox"/> N/A - The 30 additional apartment units would not warrant the need for a Program Coordinator
<b>1.2 Travel surveys</b>		
BETTER		1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress <input type="checkbox"/> N/A
<b>2. WALKING AND CYCLING</b>		
<b>2.1 Information on walking/cycling routes &amp; destinations</b>		
BASIC		2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances ( <i>multi-family, condominium</i> ) <input type="checkbox"/> N/A
<b>2.2 Bicycle skills training</b>		
BETTER		2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses <input type="checkbox"/> N/A

TDM measures: Residential developments		Check if proposed & add descriptions
<b>3. TRANSIT</b>		
<b>3.1 Transit information</b>		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances ( <i>multi-family, condominium</i> )	<input checked="" type="checkbox"/> Transit schedules are available online from OC Transpo
BETTER	3.1.2 Provide real-time arrival information display at entrances ( <i>multi-family, condominium</i> )	<input type="checkbox"/> N/A
<b>3.2 Transit fare incentives</b>		
BASIC	★ 3.2.1 Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	<input type="checkbox"/> N/A
BETTER	3.2.2 Offer at least one year of free monthly transit passes on residence purchase/move-in	<input type="checkbox"/> N/A
<b>3.3 Enhanced public transit service</b>		
BETTER	★ 3.3.1 Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels ( <i>subdivision</i> )	<input type="checkbox"/> N/A
<b>3.4 Private transit service</b>		
BETTER	3.4.1 Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	<input type="checkbox"/> N/A
<b>4. CARSHARING &amp; BIKESHARING</b>		
<b>4.1 Bikeshare stations &amp; memberships</b>		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station ( <i>multi-family</i> )	<input type="checkbox"/> N/A
BETTER	4.1.2 Provide residents with bikeshare memberships, either free or subsidized ( <i>multi-family</i> )	<input type="checkbox"/> N/A
<b>4.2 Carshare vehicles &amp; memberships</b>		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	<input type="checkbox"/> N/A
BETTER	4.2.2 Provide residents with carshare memberships, either free or subsidized	<input type="checkbox"/> N/A
<b>5. PARKING</b>		
<b>5.1 Priced parking</b>		
BASIC	★ 5.1.1 Unbundle parking cost from purchase price ( <i>condominium</i> )	<input type="checkbox"/> N/A
BASIC	★ 5.1.2 Unbundle parking cost from monthly rent ( <i>multi-family</i> )	<input type="checkbox"/> N/A

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
<b>6. TDM MARKETING &amp; COMMUNICATIONS</b>		
<b>6.1 Multimodal travel information</b>		
BASIC ★	6.1.1 Provide a multimodal travel option information package to new residents	<input type="checkbox"/> N/A
<b>6.2 Personalized trip planning</b>		
BETTER ★	6.2.1 Offer personalized trip planning to new residents	<input type="checkbox"/> N/A

## MODULE 4.6 – Neighbourhood Traffic Management

### Element 4.6.1 – Adjacent Neighbourhoods

Exempt as determined in the Scoping Document.

## MODULE 4.7 - Transit

Exempt as determined in the City of Ottawa staff review of the Scoping Document.

## MODULE 4.8 – Review of Network Concept

Exempt as determined in the Scoping Document.

## MODULE 4.9 – Intersection Design

Exempt as determined in the City of Ottawa staff review of the Scoping Document.

## SUMMARY

A Site Plan Application has been prepared for the renovation of the existing three storey apartment building at 630 Cummings Avenue. The project comprises of the renovations of the existing 12 unit apartment building to a 24 unit building, plus additions to the building which would provide 18 additional apartment units. The project would add 30 new units for a total of 42 apartment units. The existing apartment building provides 11 parking spaces, with no additional parking provided for the renovated building. The residential development is expected to be completed by 2022.

The transportation assessment has determined the following:

1. The proposed addition and renovations to the apartment building will add 30 new apartment units while retaining the 11 parking space parking lot. The additional apartment units would generate a few if any additional vehicular trips to the surrounding roads. The existing parking lot is at the rear of the apartment

building and has access only onto Borthwick Avenue. The apartment building has the main entrance at the front of the building with a walkway to the Cummings Avenue sidewalk.

2. The Site Plan provides 11 parking spaces following completion of the development. There are no additional parking spaces proposed in the renovations. A parking utilization survey was completed to determine the utilization of on-street parking along Cummings Avenue and Borthwick Avenue between Wilson Street and Montreal Road. The parking analysis determined that 28.3 percent of the available parking was utilized. Based on the survey results, there would be adequate on-street parking if spillover parking were to occur.
3. OC Transpo bus stops are within a short walk from the apartment building. The transit service along both Cummings Avenue and Montreal Road would provide access to the Blair and St. Laurent Transit Stations as well as access to the downtown core. The available transit service would reduce the number of vehicle trips from the apartment building.
4. The major modes of travel for tenants of the new apartment units would be walking, transit and cycling. The analysis of the pedestrian level of service (PLOS) was determined to be acceptable for the road segments along Cummings Avenue and Borthwick Avenue. The PLOS was below targets due to the narrow width of the sidewalk and no boulevard along Cummings Avenue, and no sidewalks along Borthwick Avenue. The bicycle level of service (BLOS) met the targets documented in the *Multi-Modal Level of Service (MMLoS) Guidelines* published for the City of Ottawa. The transit level of service (TLOS) along Cummings Avenue was acceptable with no target set since there are no transit priority plans along Cummings Avenue.
5. The additional 30 apartment units for the building at 630 Cummings Avenue would not trigger any requirements for modifications to Cummings Avenue or Borthwick Avenue. The existing access to the building parking lot would remain unchanged.

Prepared by:

*David J. Halpenny*

David J. Halpenny, M. Eng., P. Eng.



## **APPENDIX**

### **SCREENING FORM**

### **MMLOS ANALYSIS SHEETS**

## EXHIBIT 1.1 SCREENING FORM

### City of Ottawa 2017 TIA Guidelines Screening Form

#### 1. Description of Proposed Development

<b>Municipal Address</b>	630 Cummings Avenue
<b>Description of Location</b>	Residential R4N zoned property east of Vanier Parkway
<b>Land Use Classification</b>	Residential
<b>Development Size (units)</b>	30 New Apartments Units. Total building size 42 Apartment Units
<b>Development Size (m<sup>2</sup>)</b>	TBD
<b>Number of Accesses and Locations</b>	One access from Borthwick Avenue
<b>Phase of Development</b>	N/A
<b>Buildout Year</b>	N/A

If available, please attach a sketch of the development or site plan to this form.

#### 2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type	Minimum Development Size
Townhomes or apartments	90 units

	Yes	No
<b>The apartment addition to 630 Cummings Avenue proposes 42 additional Apartment Units.</b>  <b>30 Apartment Units &lt; 90 Minimum Development Size</b>		X

*\* If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

**If the proposed development size is greater than the sizes identified above, the Trip Generation Trigger is satisfied.**

### 3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		X

\*DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

**If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.**

### 4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 km/hr or greater?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	X	
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

**If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.**

### 5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?		X
Does the development satisfy the Location Trigger?		X
Does the development satisfy the Safety Trigger?	X	

**If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).**



## EXHIBIT 4.1 CUMMINGS AVENUE - PLOS Segment Evaluation

STREET Cummings Avenue  
 FROM Wilson Street  
 TO Montreal Road  
 YEAR 2027  
 DIRECTION Northbound–Southbound  
 MMLOS MODE PLOS

SEGMENT SCORE **E**

Sidewalk Width (m)	Boulevard Width (m)	Motor Vehicle Traffic Volume (AADT)	Presence of On-street Parking	Segment PLOS			
				Operating Speed (km/h)			
				≤30	>30 or 50	>50 or 60	>60 <sup>1</sup>
2.0 or more	> 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	B	N/A
			No	A	B	C	D
	0.5 to 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	C	N/A
			No	A	C	D	E
	0	≤ 3000	NA	A	B	C	D
		> 3000	Yes	B	B	D	N/A
			No	B	C	E	F
1.8	> 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	C	N/A
			No	A	C	D	E
	0.5 to 2	≤ 3000	N/A	A	B	B	D
		> 3000	Yes	A	C	C	N/A
			No	B	C	E	E
	0	≤ 3000	N/A	A	B	C	D
		> 3000	Yes	B	C	D	N/A
			No	C	D	F	F
1.5	> 2	≤ 3000	N/A	C	C	C	C
		> 3000	Yes	C	C	D	N/A
			No	C	D	E	E
	0.5 to 2	≤ 3000	N/A	C	C	C	D
		> 3000	Yes	C	C	D	N/A
			No	D	E	E	E
0	N/A		D	<b>E</b>	F <sup>2</sup>	F <sup>2</sup>	
<1.5	N/A		F <sup>3</sup>	F <sup>3</sup>	F <sup>3</sup>	F <sup>3</sup>	
No sidewalk	N/A		C <sup>4</sup>	F <sup>3</sup>	F <sup>3</sup>	F <sup>3</sup>	

## EXHIBIT 4.2 BORTHWICK AVENUE - PLOS Segment Evaluation

STREET Borthwick Avenue  
 FROM Wilson Street  
 TO Montreal Road  
 YEAR 2027  
 DIRECTION Northbound–Southbound  
 MMLOS MODE PLOS

SEGMENT SCORE **F**

Sidewalk Width (m)	Boulevard Width (m)	Motor Vehicle Traffic Volume (AADT)	Presence of On-street Parking	Segment PLOS			
				Operating Speed (km/h)			
				≤30	>30 or 50	>50 or 60	>60 <sup>1</sup>
2.0 or more	> 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	B	N/A
			No	A	B	C	D
	0.5 to 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	C	N/A
			No	A	C	D	E
	0	≤ 3000	NA	A	B	C	D
		> 3000	Yes	B	B	D	N/A
			No	B	C	E	F
1.8	> 2	≤ 3000	N/A	A	A	A	B
		> 3000	Yes	A	B	C	N/A
			No	A	C	D	E
	0.5 to 2	≤ 3000	N/A	A	B	B	D
		> 3000	Yes	A	C	C	N/A
			No	B	C	E	E
	0	≤ 3000	N/A	A	B	C	D
		> 3000	Yes	B	C	D	N/A
			No	C	D	F	F
1.5	> 2	≤ 3000	N/A	C	C	C	C
		> 3000	Yes	C	C	D	N/A
			No	C	D	E	E
	0.5 to 2	≤ 3000	N/A	C	C	C	D
		> 3000	Yes	C	C	D	N/A
			No	D	E	E	E
0	N/A		D	E	F <sup>2</sup>	F <sup>2</sup>	
<1.5	N/A		F <sup>3</sup>	F <sup>3</sup>	F <sup>3</sup>	F <sup>3</sup>	
No sidewalk	N/A		C <sup>4</sup>	F <sup>3</sup>	F <sup>3</sup>	F <sup>3</sup>	

## EXHIBIT 4.3 CUMMINGS AVENUE - BLOS Segment Evaluation

STREET Cummings Avenue  
 FROM Wilson Street  
 TO Montreal Road  
 YEAR 2027  
 DIRECTION Northbound–Southbound  
 MMLOS MODE BLOS

SEGMENT SCORE **D**

Type of Bikeway		LOS
<b>Physically Separated Bikeway</b> (cycle tracks, protected bike lanes and multi-use paths). Physical separation refers to, but is not limited to, curbs, raised medians, bollards and parking lanes (adjacent to the bike lane along the travelled way i.e. not curbside).		
		<b>A</b>
<b>Bike Lanes Not Adjacent Parking Lane - Select Worst Scoring Criteria</b>		
No. of Travel Lanes	1 travel lane in each direction	A
	2 travel lanes in each direction separated by a raised median	B
	2 travel lanes in each direction without a separating median	C
Bike Lane Width	More than 2 travel lanes in each direction	D
	> 1.8 m wide bike lane (includes marked buffer and paved gutter width)	A
	≥1.5 m to <1.8 m wide bike lane (includes marked buffer and paved gutter width)	B
Operating Speed	≥1.2 m to <1.5 m wide bike lane (includes marked buffer and paved gutter width)	C
	≤ 50 km/h operating speed	A
	60 km/h operating speed	C
Bike lane blockage (commercial areas)	> 70 km/h operating speed	E
	Rare	A
	Frequent	C
<b>Bike Lanes Adjacent to curbside Parking Lane - Select Worst Scoring Criteria</b>		
No. of Travel Lanes	1 travel lane in each direction	A
	2 or more travel lanes in each direction	C
Bike Lane and Parking Lane Width	4.5 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	A
	4.25 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	B
	≤ 4.0 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	C
Operating Speed	< 40 km/h operating speed	A
	50 km/h operating speed	B
	60 km/h operating speed	D
	> 70 km/h operating speed	F
Bike lane blockage (commercial areas)	Rare	A
	Frequent	C
<b>Mixed Traffic</b>		
No. of Travel Lanes and Operating Speed	2 travel lanes; ≤ 40 km/h; no marked centerline or classified as residential	A
	2 to 3 travel lanes; ≤ 40 km/h	B
	2 travel lanes; 50 km/h; no marked centerline or classified as residential	B
	2 to 3 travel lanes; 50 km/h	<b>D</b>
	4 to 5 travel lanes; ≤ 40 km/h	D
	4 to 5 travel lanes; ≥ 50 km/h	E
	6 or more travel lanes; ≤ 40 km/h	E
≥ 60 km/h	F	
<b>Unsignalized Crossing along Route: no median refuge</b>		
No. of Travel Lanes on Side Street and Operating Speed	3 or less lanes being crossed; ≤ 40 km/h	A
	4 to 5 lanes being crossed; ≤ 40 km/h	B
	3 or less lanes being crossed; 50 km/h	B
	4 to 5 lanes being crossed; 50 km/h	C
	3 or less lanes being crossed; 60 km/h	C
	4 to 5 lanes being crossed; 60 km/h	D
	6 or more lanes being crossed; ≤ 40 km/h	E
	3 or less lanes being crossed; ≥ 65 km/h	E
6 or more lanes being crossed; ≥ 50 km/h	F	
4 to 5 lanes being crossed; ≥ 65 km/h	F	
<b>Unsignalized Crossing along Route: with median refuge (&lt; 1.8 m wide)</b>		
No. of Travel Lanes on Side Street and Operating Speed	5 or less lanes being crossed; ≤ 40 km/h	A
	3 or less lanes being crossed; 50 km/h	A
	6 or more lanes being crossed; ≤ 40 km/h	B
	4 to 5 lanes being crossed; 50 km/h	B
	3 or less lanes being crossed; 60 km/h	B
	6 or more lanes being crossed; 50 km/h	C
	4 to 5 lanes being crossed; 60 km/h	C
	3 or less lanes being crossed; ≥ 65 km/h	D
	6 or more lanes being crossed; 60 km/h	E
	4 to 5 lanes being crossed; ≥ 65 km/h	E
6 or more lanes being crossed; ≥ 65 km/h	F	

## EXHIBIT 4.4 BORTHWICK AVENUE - BLOS Segment Evaluation

STREET Borthwick Avenue  
 FROM Wilson Street  
 TO Montreal Road  
 YEAR 2027  
 DIRECTION Northbound–Southbound  
 MMLOS MODE BLOS

SEGMENT SCORE **B**

Type of Bikeway		LOS
<b>Physically Separated Bikeway</b> (cycle tracks, protected bike lanes and multi-use paths). Physical separation refers to, but is not limited to, curbs, raised medians, bollards and parking lanes (adjacent to the bike lane along the travelled way i.e. not curbside).		
		<b>A</b>
<b>Bike Lanes Not Adjacent Parking Lane - Select Worst Scoring Criteria</b>		
No. of Travel Lanes	1 travel lane in each direction	A
	2 travel lanes in each direction separated by a raised median	B
	2 travel lanes in each direction without a separating median	C
Bike Lane Width	More than 2 travel lanes in each direction	D
	> 1.8 m wide bike lane (includes marked buffer and paved gutter width)	A
	≥1.5 m to <1.8 m wide bike lane (includes marked buffer and paved gutter width)	B
Operating Speed	≥1.2 m to <1.5 m wide bike lane (includes marked buffer and paved gutter width)	C
	≤ 50 km/h operating speed	A
	60 km/h operating speed	C
Bike lane blockage (commercial areas)	> 70 km/h operating speed	E
	Rare	A
	Frequent	C
<b>Bike Lanes Adjacent to curbside Parking Lane - Select Worst Scoring Criteria</b>		
No. of Travel Lanes	1 travel lane in each direction	A
	2 or more travel lanes in each direction	C
Bike Lane and Parking Lane Width	4.5 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	A
	4.25 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	B
	≤ 4.0 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	C
Operating Speed	< 40 km/h operating speed	A
	50 km/h operating speed	B
	60 km/h operating speed	D
	> 70 km/h operating speed	F
Bike lane blockage (commercial areas)	Rare	A
	Frequent	C
<b>Mixed Traffic</b>		
No. of Travel Lanes and Operating Speed	2 travel lanes; ≤ 40 km/h; no marked centerline or classified as residential	A
	2 to 3 travel lanes; ≤ 40 km/h	B
	2 travel lanes; 50 km/h; no marked centerline or classified as residential	<b>B</b>
	2 to 3 travel lanes; 50 km/h	D
	4 to 5 travel lanes; ≤ 40 km/h	D
	4 to 5 travel lanes; ≥ 50 km/h	E
	6 or more travel lanes; ≤ 40 km/h	E
≥ 60 km/h	F	
<b>Unsignalized Crossing along Route: no median refuge</b>		
No. of Travel Lanes on Side Street and Operating Speed	3 or less lanes being crossed; ≤ 40 km/h	A
	4 to 5 lanes being crossed; ≤ 40 km/h	B
	3 or less lanes being crossed; 50 km/h	B
	4 to 5 lanes being crossed; 50 km/h	C
	3 or less lanes being crossed; 60 km/h	C
	4 to 5 lanes being crossed; 60 km/h	D
	6 or more lanes being crossed; ≤ 40 km/h	E
	3 or less lanes being crossed; ≥ 65 km/h	E
6 or more lanes being crossed; ≥ 50 km/h	F	
4 to 5 lanes being crossed; ≥ 65 km/h	F	
<b>Unsignalized Crossing along Route: with median refuge (&lt; 1.8 m wide)</b>		
No. of Travel Lanes on Side Street and Operating Speed	5 or less lanes being crossed; ≤ 40 km/h	A
	3 or less lanes being crossed; 50 km/h	A
	6 or more lanes being crossed; ≤ 40 km/h	B
	4 to 5 lanes being crossed; 50 km/h	B
	3 or less lanes being crossed; 60 km/h	B
	6 or more lanes being crossed; 50 km/h	C
	4 to 5 lanes being crossed; 60 km/h	C
	3 or less lanes being crossed; ≥ 65 km/h	D
	6 or more lanes being crossed; 60 km/h	E
	4 to 5 lanes being crossed; ≥ 65 km/h	E
6 or more lanes being crossed; ≥ 65 km/h	F	

## EXHIBIT 4.5 CUMMINGS AVENUE - TLOS Segment Evaluation

STREET Cummings Avenue  
 FROM Wilson Street  
 TO Montreal Road  
 YEAR 2027  
 DIRECTION Northbound–Southbound  
 MMLOS MODE TLOS

SEGMENT SCORE **D**

Facility Type		Level/exposure to congestion delay, friction and incidents			Quantitative Measurement	LOS
		Congestion	Friction	Incident Potential		
Segregated ROW		No	No	No	N/A	A
Bus lane	No/limited parking/driveway friction	No	Low	Low	$C_f \leq 60$	B
	Frequent parking/driveway friction	No	Medium	Medium	$C_f > 60$	C
Mixed Traffic	Limited parking/driveway friction	Yes	Low	Medium	$W/V_p \geq 0.8$	<b>D</b>
	Moderate parking/driveway friction	Yes	Medium	Medium	$W/V_p \leq 0.6$	E
	Frequent parking/driveway friction	Yes	High	High	$W/V_p < 0.4$	F

Notes:

$C_f$ , Conflict Factor = (Number of driveways x crossing volume) / 1 km

$W/V_p$  is the ratio of average transit travel speed to posted speed limit